FIG. 1

start 102

n = 1 104

Lock level n 106

Success? 108 — yes / no

Add 1 to n 110

n = 1? 112 — yes / no

Lock table 114

Success 116 — Y / N

Access table 120

end with error 118

Unlock table 122

Unlock level 1 124

end 126

n = n - 1 128

Lock level n 130

Success? 132 — yes / no

Unlock level n+1 134

FIG. 2

FIG. 3

200

Process A   Process B   Process C   Procedure 100a
Procedure 100b
Procedure 100c   FIFO queue 88   Table 84

Request access to table

Grant access to table — 208

Process data in table — 210

Request access to table — 212

Request access to table — 216

Notify that use of table has completed — 220

Grant access to table — 230

Process data in table

Notify that use of table has completed — 234

Grant access to table — 244

Process data in table

Notify that use of table has completed — 248

Assign lock level 1 to process A — 202

Lock table — 206

Assign lock level 1 to process A — 204

Assign lock level 2 to process B, wait for level 1 to unlock — 214

Assign lock level 3 to process C, wait for level 2 to unlock — 218

Unlock table — 222

Unlock level 1 — 224

Lock table — 226

Assign lock level 1 to process B, unlock level 2 — 228

Assign lock level 2 to process C, unlock level 3 — 229

Unlock table — 232

Unlock level 1 — 236

Lock table — 240

Assign lock level 1 to process C, unlock level 2 — 238

Unlock table — 242

Unlock level 1 — 246

Unlock table — 252

Unlock level 1 — 250